

[0057] The “circuit” may also include one or more processors communicatively coupled to one or more memory or memory devices. In this regard, the one or more processors may execute instructions stored in the memory or may execute instructions otherwise accessible to the one or more processors. In some embodiments, the one or more processors may be embodied in various ways. The one or more processors may be constructed in a manner sufficient to perform at least the operations described herein. In some embodiments, the one or more processors may be shared by multiple circuits (e.g., circuit A and circuit B may comprise or otherwise share the same processor which, in some example embodiments, may execute instructions stored, or otherwise accessed, via different areas of memory). Alternatively or additionally, the one or more processors may be structured to perform or otherwise execute certain operations independent of one or more co-processors. In other example embodiments, two or more processors may be coupled via a bus to enable independent, parallel, pipelined, or multi-threaded instruction execution. Each processor may be implemented as one or more general-purpose processors, application specific integrated circuits (ASICs), field programmable gate arrays (FPGAs), digital signal processors (DSPs), or other suitable electronic data processing components structured to execute instructions provided by memory. The one or more processors may take the form of a single core processor, multi-core processor (e.g., a dual core processor, triple core processor, quad core processor, etc.), microprocessor, etc. In some embodiments, the one or more processors may be external to the apparatus, for example the one or more processors may be a remote processor (e.g., a cloud based processor). Alternatively or additionally, the one or more processors may be internal and/or local to the apparatus. In this regard, a given circuit or components thereof may be disposed locally (e.g., as part of a local server, a local computing system, etc.) or remotely (e.g., as part of a remote server such as a cloud based server). To that end, a “circuit” as described herein may include components that are distributed across one or more locations.

[0058] An exemplary system for implementing the overall system or portions of the embodiments might include a general purpose computing computers in the form of computers, including a processing unit, a system memory, and a system bus that couples various system components including the system memory to the processing unit. Each memory device may include non-transient volatile storage media, non-volatile storage media, non-transitory storage media (e.g., one or more volatile and/or non-volatile memories), etc. In some embodiments, the non-volatile media may take the form of ROM, flash memory (e.g., flash memory such as NAND, 3D NAND, NOR, 3D NOR, etc.), EEPROM, MRAM, magnetic storage, hard discs, optical discs, etc. In other embodiments, the volatile storage media may take the form of RAM, TRAM, ZRAM, etc. Combinations of the above are also included within the scope of machine-readable media. In this regard, machine-executable instructions comprise, for example, instructions and data which cause a general purpose computer, special purpose computer, or special purpose processing machines to perform a certain function or group of functions. Each respective memory device may be operable to maintain or otherwise store information relating to the operations performed by one or more associated circuits, including processor instruc-

tions and related data (e.g., database components, object code components, script components, etc.), in accordance with the example embodiments described herein.

What is claimed:

1. A regulator comprising:

a reducing valve operable between a closed position and an open position, the reducing valve comprising:
a first opening inlet configured to receive fluid to bias the reducing valve towards the open position;
a first closing inlet configured to receive fluid to bias the reducing valve towards the closed position; and
a first spring configured to transmit a first spring force to the reducing valve to bias the reducing valve towards the closed position;

an accumulator configured to store fluid at a first pressure;
an accumulator line configured to receive fluid from the accumulator and to provide the fluid to the first opening inlet at the first pressure; and

a regulated line fluidly connected to the first closing inlet at a second pressure;

wherein the reducing valve transitions from the closed position to the open position when a first force created by the first pressure on the reducing valve is greater than a sum of the first spring force, a first tolerance, and a second force created by the second pressure on the reducing valve.

2. The regulator of claim 1, further comprising:

a relief valve operable between a closed position and an open position, the relief valve comprising:

a second opening inlet configured to receive fluid to bias the relief valve towards the open position;
a second closing inlet configured to receive fluid to bias the relief valve towards the closed position; and
a second spring configured to transmit a second spring force to the relief valve to bias the relief valve towards the closed position.

3. The regulator of claim 2, wherein the accumulator line is further configured to provide the fluid to the second closing inlet at the first pressure;

wherein the regulated line is fluidly connected to the second opening inlet at the second pressure; and

wherein the relief valve transitions from the closed position to the open position when a third force created by the second pressure on the relief valve is greater than a sum of the second spring force, a second tolerance, and a fourth force created by the second pressure on the relief valve.

4. The regulator of claim 1, further comprising:

a speed control network connected to the regulated line and to the first closing inlet, the speed control network comprising a first branch configured to facilitate transmission of fluid between the regulated line and the first closing inlet, the first branch including a constriction configured to reduce a flow rate of fluid through the constriction.

5. The regulator of claim 4, wherein the speed control network further comprises a second branch configured to facilitate transmission of fluid between the regulated line and the first closing inlet, the second branch including a check valve configured to facilitate transmission of fluid from the regulated line to the first closing inlet, the check valve additionally configured to substantially prohibit transmission of fluid from the first closing inlet to the regulated line.